

**Pilot Program Quarterly Report of Iowa Health System  
Period 7/1/12-9/30/12  
WC Docket No. 02-60**

**1. Project Contact and Coordination Information**

**a. Identify the project leader(s) and respective business affiliations.**

Bill Leaver, President and CEO  
Iowa Health System

**b. Provide a complete address for postal delivery and the telephone, fax, and e-mail address for the responsible administrative official.**

Bill Leaver  
President and CEO  
Iowa Health System  
1776 West Lakes Parkway,  
Suite 400  
West Des Moines, IA 50266  
Telephone: 515-241-6347  
Fax: 515-241-5712  
E-mail: LeaverWB@ihs.org

**c. Identify the organization that is legally and financially responsible for the conduct of activities supported by the award.**

Iowa Health System  
1776 West Lakes  
Parkway, Suite 400  
West Des Moines, IA  
50266

**d. Explain how project is being coordinated throughout the state or region.**

The project is being coordinated by Iowa Health System ("IHS") leadership in consultation with Fiberutilities Group LLC.

After identifying potential participants and attending RHCPP training, IHS met with potential participants in the region. As a result of that meeting, IHS received letters of agency from 29 initial participants.

A meeting of initial participants was held in Des Moines, Iowa on June 5, 2008 to discuss the project as well as a proposed governance structure that emphasizes participant input into the project's operations. A second meeting of this group was held September 3, 2008 in Des Moines. Since that date, the group has also met on April 2, 2009, June 3, 2009 and July 15, 2009. Going forward, the group intends to meet on at least a monthly basis either in person, by video conference, or by teleconference. This group will play a central role in the governance and operation of the project to ensure that it best meets participants' needs.

A RFP for 15 year lit capacity IRUs for access to the IHS backbone network was issued on October 6, 2008 with bid closure on November 17, 2008. Bid responses to the RFP were received from 10 vendors. All bid response data was compiled, analyzed, and scored resulting in the selection of vendors for final contract negotiation. IHS entered into IRU agreements with MCC Telephony, L.L.C. and the Iowa Communications Network on March 10, 2009.

One eligible participant, Grinnell Regional Medical Center, opted to not participate in

phase one deployment and was subsequently removed from the FCC support request. IHS continues to identify and meet other potential participants whom IHS anticipates will join the project in future deployment phases.

The 466A, 466A attachments, vendor certification form, Network Cost Worksheets and other required paperwork and response information was uploaded to USAC for processing. A Funding Commitment Letter was issued for MCC Telephony, L.L.C. on March 27, 2009 and a Funding Commitment Letter for the Iowa Communications Network was issued on April 13, 2009. All paperwork is on file with the USAC.

A pre-launch participant meeting was held in Des Moines, Iowa on April 2, 2009 to update participants on status and continuing to prepare for initial network usage when completed. All initial participants signed the paperwork necessary to belong to HealthNet connect, L.C., who as agent for IHS provides and administers the RHCPP last mile connections to the IHS network. A press conference announcing the network launch to the public was held in Des Moines, Iowa on April 14, 2009, at which Tom Buckley, the Deputy Division Chief of the Telecommunications Access Policy Division of the FCC's Wireline Competition Bureau was present and spoke.

All last mile connections for initial participants were completed, tested, and accepted by mid July 2009. Internet 2 invoice requirements were submitted and all payments made. Two invoices for MCC Telephony (sc) and one invoice for the Iowa Communications have been paid in full. All paperwork is on file with USAC

Local customer edge routers are the final step toward connectivity to the network and are provided by the participants at the participant's expense. Ninety percent of initial participants' routers have been procured, installed and configured as of this Quarterly Report.

The governing board meets monthly to discuss the status of the project, discuss potential new members, announce new applications available to participants over the network, and maintain an ongoing planning dialog related to future application rollouts to improve health care, particularly in rural areas.

It is anticipated that the second RFP will be prepared prior to the end of calendar year 2009.

Update: The second RFP is anticipated to be posted in the first quarter of 2010.

The second RFP and associated paperwork was at USAC as of 3/31/10 with responses to USAC questions. As of that date the RFP has not yet been posted.

The Phase 2 RFP was posted to the USAC site on April 13<sup>th</sup>, 2010 with a bid closing date of June 11<sup>th</sup>, 2010. As of June 11<sup>th</sup>, 2010, bid responses had been received from 7 vendors covering 35 of the 41 locations offered for bid. Bids were in the process of being analyzed and scored as of June 30<sup>th</sup>, 2010. No awards were made as of June 30<sup>th</sup>, 2010 although it is anticipated that numerous Phase 2 RFP awards will be made by mid July 2010.

Funding Commitment Letters for Phase 2 were issued by USAC on September 30<sup>th</sup>, 2010. This added an additional 30 members to the network leaving only 1 remaining Phase 2 participant still in the contract negotiation phase. Total active or "in process under FCL" participants in HNC as of October 1<sup>st</sup>, 2010 will total 59 leaving 19 participants to process in Phase 3 to complete the project.

Phase 2 deployment began in December of 2010. As of 12/31/10, three new sites were physically connected from the Phase 2 group and are currently in the invoicing process

with USAC.

It was anticipated that a Phase 3 RFP will be issued by the end of 2010 to complete the

The Phase 3 RFP (final HNC phase) was posted on January 10, 2011 and closed on February 25, 2011. The RFP received responses from 11 bidders. There were a total of 68 eligible sites available for bid and responses were received for 56 of those sites. All bids were subsequently scored using the criteria outlined in the RFP. Because this was the last phase of HNC and the budget was finite there were more bids received than available funds to do all sites. A total of 38 sites were selected and all documentation (RFP responses, bid scoring, and site selection) were submitted to USAC for their final review prior to awarding to winning bidders. It is anticipated that awards will be made and final contracts be awarded in the upcoming reporting period.

Phase 2 of HNC continued deployment with all sites except five being completed (connection tested and accepted) during this reporting period. The vendor and USAC invoicing process are underway on all completed sites. It is anticipated that the remaining five Phase 2 sites will be completed in the upcoming reporting period.

HNC added two ineligible users (Iowa Radiology and Lightedge Networks) to the network during the reporting period. Both ineligible users provided 100% of the cost of their access connection to the HNC core network.

As of the current reporting period all Phase 2 sites have been completed and are on line.

As of the end of this reporting period, 38 Phase 3 sites have received FCL's and are in the process of being deployed. A total of two sites experienced minor address changes due to physical moves and one site required substitution for another site. The new site was also originally listed on the Phase 3 465 attachment.

Letters of explanation updated LOA's and vendor contract addendums reflecting these changes were submitted to USAC for review and approval in mid October.

It is anticipated that substantively all Phase 3 sites will be fully deployed and through the billing process by the end of the upcoming reporting period.

A HNC user technical forum was created to discuss technical issues as well as application related knowledge sharing. This forum was launched in July of 2011. This user forum allows IT leadership from HNC participants to share successful deployment of new applications as well as provide support for each other in resolving any application related issues. The forum may be accessed by hitting the Forum tab on the HNC website ([www.healthnetconnect.org](http://www.healthnetconnect.org)).

Further updates and relevant details will follow in subsequent Quarterly Reports as new participants come online and health care-related applications are launched.

As of the end of this reporting period, 37 of the 38 Phase 3 sites were fully deployed. It is anticipated that 37 of the 38 Phase 3 sites will be complete through the billing process by the end of the upcoming reporting period.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the end of the fourth quarter, 2012.

## **2. Identify all health care facilities included in the network.**

- a. Provide address (including county), zip code, Rural Urban Commuting Area (RUCA) code (including primary and secondary), six-digit census tract, and phone number for each health care facility participating in the network.**
- b. For each participating institution, indicate whether it is:**
  - i. Public or non-public;**
  - ii. Not-for-profit or for-profit;**
  - iii. An eligible health care provider or ineligible health care provider with an explanation of why the health care facility is eligible under section 254 of the 1996 Act and the Commission's rules or a description of the type of ineligible health care provider entity.**

See revised Attachment A. The 28 entities listed in Attachment A are eligible participants who have signed a letter of agency with IHS. Of those 28 eligible institutions, 26 are receiving RHCPP funding support as part of the phase one installation process. The remaining two eligible entities are not receiving funding support at the time of this report.

Note: The eligible health care providers are eligible because they are nonprofit hospitals under 47 U.S.C. Section 254(h) (7) (B).

As of December 31st, 2009 one eligible entity (that did NOT receive FCC funding support) has opted to no longer participate in. Mercer County Hospital, Aledo, Illinois, is no longer a member.

The Phase 2 RFP closed on June 30<sup>th</sup> 2010, and as of that date, no awards to add new participants to the network were made.

See revised Attachment A1 (supersedes Attachment A) outlining pre existing HNc members as well as 30 participants receiving FCL on September 30<sup>th</sup>, 2010. Total HNc active or under "in process under FCL" participation stands at 59 participants.

There were 3 additional sites physically connected to HNc from Phase 2 as of 12/31/10.

A total of 25 Phase 2 participants have been physically connected to the network as of March 31, 2011 leaving five remaining Phase 2 sites to complete in the upcoming reporting period.

See revised Attachment A1 outlining all Phase 1 and Phase 2 HNc participants which identifies completed sites and ineligible users fully deployed at the end of the reporting period.

See revised Attachment A2 outlining all Phase 3 HNc participants under FCL including substitution and address changes currently under USAC review. .

It is anticipated that substantively all Phase 3 sites will be fully deployed and through the billing process by the end of the upcoming reporting period.

On November 16<sup>th</sup>, 2011, USAC approved the 3 substitution/address changes that were submitted during the last reporting period. As of the end of this reporting period, 37 of the 38 Phase 3 sites were fully deployed. It is anticipated that 37 of the 38 Phase 3 sites will be complete through the billing process by the end of the upcoming reporting period.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the end of the fourth quarter, 2012.

**3. Network Narrative: In the first quarterly report following the completion of the competitive bidding process and the selection of vendors, the selected participant must submit an updated technical description of the communications network that it intends to implement, which takes into account the results of its network design studies and negotiations with its vendors. This technical description should provide, where applicable:**

**a. Brief description of the backbone network of the dedicated health care network, e.g., MPLS network, carrier-provided VPN, a SONET ring;**

The combination of the access connections and the IHS-owned backbone network is a private fiber network equipped with Layer 2 (Ethernet) transport equipment and Layer 3 (packets) core routers. (See Attachment B). The network will be connected to National Lambda Rail ("NLR") and Internet 2. The network is currently lit to 2 Gbps of total capacity and can grow to 10Gbps by inserting small form pluggable (SFP) optics into existing 10 lambda CWDM muxes/demuxes at the appropriate equipment locations in the network.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**b. Explanation of how health care provider sites will connect to (or access) the network, including the access technologies/services and transmission speeds;**

The access connections to the IHS-owned backbone network will be a fiber-based transparent LAN solution providing symmetrical 100Mbps of Ethernet connectivity using Gigabit Ethernet Passive Optical Network (GEAPON) technology to the premise. The Layer 2 Ethernet solution will support VoIP, 802.1 Q VLAN tagging, and video streaming, in addition to data transport.

It is anticipated that additional participants will connect to a centralized router in the IHS backbone network via a direct build fiber or carrier access facilities.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**c. Explanation of how and where the network will connect to a national backbone such as NLR or Internet 2;**

The network will connect to NLR and Internet 2 via the Metropolitan Research and Education Network ("MREN") located at Northwestern University in Chicago. The connections will be a 1 gigabit per second interface with MREN's shared lit fiber access to NLR and Internet 2. 466A related funding support documents for Internet 2 membership dues were submitted to USAC on April 9, 2009 for review and processing.

Internet 2 and NLR connectivity has been completed and tested. Participants who have completed their Customer Edge Router configurations have access to I2 / NLR network endpoints.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**d. Number of miles of fiber construction, and whether the fiber is buried or aerial;**

The RFP for access to the IHS-owned backbone network requested a 15 year lit capacity IRU for 100 Mbs symmetrical Ethernet. No fiber construction using RHCPP funds is anticipated to deliver the access connections to the initial group of eligible participants connecting to the network.

It is anticipated that some future sites will involve some direct fiber builds. Those fiber construction elements would be reported in subsequent Quarterly Reports.

Now that all three phases of HNC are nearing completion it is apparent that all access connections to the HNC core will consist of 15 year lit capacity IRU's with capacity of 10, 30 or 100 Mbps.

As of September 30, 2011 this response represents no changes from the previous Quarterly Report.

As of December 31, 2011, we can confirm that all access connections to the HNC core will consist of 15 year lit capacity IRU's with capacity of 10, 30 or 100 Mbps.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**e. Special systems or services for network management or maintenance (if applicable) and where such systems reside or are based.**

Layer 3 network management will be accomplished by a provider edge router on the participant's premise located at the end of the provider's connection. It will be managed by IHS. All other management and maintenance of equipment related to the access connection will be provided by the vendor providing the 15 year lit capacity IRU.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**4. List of Connected Health Care Providers: Provide information below for all eligible and non-eligible health care provider sites that, as of the close of the most recent reporting period, are connected to the network and operational.**

- a. Health care provider site;**
- b. Eligible provider (Yes/No);**
- c. Type of network connection (e.g., fiber, copper, wireless);**
- d. How connection is provided (e.g., carrier-provided service; self-constructed; leased facility);**
- e. Service and/or speed of connection (e.g., DS1, DS3, DSL, OC3, Metro Ethernet (10 Mbps);**
- f. Gateway to NLR, Internet2, or the Public Internet (Yes/No);**
- g. Site Equipment (e.g., router, switch, SONET ADM, WDM) including manufacturer name and model number.**
- h. Provide a logical diagram or map of the network.**

The access connections related to this network have not been completed at the time covered by this Quarterly Report (April 1, 2009 through June 30, 2009), however construction / configuration was underway with substantial completion anticipated by June 30, 2009. Accordingly, as of the close of the most recent reporting period, there were no "Connected Health Care Providers" connected to the network and operational. Attachment C is a map of the proposed network. (See also Attachment B for a logical



diagram of the access connections.)

During the period April 1, 2009 through June 30, 2009 a total of 14 members had their access connection completed, tested, and accepted. The remaining members were completed, tested and accepted by July 23, 2009. See Attachment B for a logical diagram of the access connections.

See revised Attachments A and C indicating eligible participants connected as of March 31, 2011.

See revised Attachments A1, C,C1 indicating eligible and ineligible participants connected or “in process under FCL” as of March 31, 2011.

Attachments A2 and C2 outline the Phase 3 participants under FCL that will be deployed by the end of the upcoming reporting period.

As of December 31, 2011 USAC approved 3 address changes. Additional documentation regarding the address changes was previously provided and the attachments reflect the corrected address changes.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**5. Identify the following non-recurring and recurring costs,<sup>423</sup> where applicable shown both as budgeted and actually incurred for the applicable quarter and funding year-to-date.**

**a. Network Design**

Network design was funded by IHS, independent of the RHCPP and cost recovery for design costs will not be sought through that program.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

---

<sup>423</sup>Non-recurring costs are flat charges incurred only once when acquiring a particular service or facility. Recurring costs are costs that recur, typically on a monthly basis, because they vary with respect to usage or length of service contract.

**b. Network Equipment, including engineering and installation**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of the December 31, 2011, deployment of 37 of the 38 Phase 3 sites was complete.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the first part of the fourth quarter, 2012.

**c. Infrastructure Deployment/Outside Plant**

**i. Engineering**

**ii. Construction**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of the December 31, 2011, deployment was complete for 37 of the 38 Phase 3 sites.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the first part of the fourth quarter, 2012.



**d. Internet2, NLR, or Public Internet Connection**

As of December 31st, 2009 Internet 2 and NLR are fully functional and all initial participants who have their customer edge router configured have access to all I2 / NLR network endpoints. The actual recurring cost for interconnecting to Internet2 is \$25,000. The actual recurring cost of interconnecting to MREN is \$28,800. Both of these costs are budgeted for future years. Public internet capability design, testing and user launch was completed in November 2009. Through December 31<sup>st</sup> 2009 a total of ten (ten) users ordered public internet connections ranging from 10 to 50 megabits in size. Users continue to integrate Internet into their onsite LAN designs and security configurations.

As of September 30<sup>th</sup> 2010 Internet 2 and MREN contracts for HNC have been renewed for current program year.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

As of June 30, 2011 the upcoming period Internet 2 annual renewal has been processed and an FCL has been issued.

This response represents no changes from the previous Quarterly Report

As of September 30, 2012, this response represents no changes from the previous Quarterly Report.

**e. Leased Facilities or Tariffed Services**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of September 30, 2012, deployment was complete for 37 of the 38 Phase 3 sites.

**f. Network Management, Maintenance, and Operation Costs (not captured elsewhere)**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of June 30, 2012, deployment was complete for all of the 38 Phase 3 sites.

**g. Other Non-Recurring and Recurring Costs**

There are no other non-recurring or recurring costs related to the access connections as of this Quarterly Reporting period.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**6. Describe how costs have been apportioned and the sources of the funds to pay them:**

**a. Explain how costs are identified, allocated among, and apportioned to both eligible and ineligible network participants.**

Ineligible participants must fund 100% of their cost to access the backbone network of IHS. Eligible entities connecting in the first phase of deployment will have 15% of their access costs funded by IHS and 85% funded by the RHCPP. IHS is funding 100% of the capital, maintenance, and operational costs of the backbone network. Thus, no cost allocation is required between eligible and ineligible entities for backbone network costs.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**b. Describe the source of funds from:**

- i. Eligible Pilot Program network participants**
- ii. Ineligible Pilot Program network participants**

See Attachment D.

As of June 30, 2012 this response represents no changes from the previous Quarterly Report.

**c. Show contributions for all other sources (e.g., local, state, and federal sources,**

and other grants).

- i. **Identify source of financial support and anticipated revenues that is paying for costs not covered by the fund and by Pilot Program participants.**
- ii. **Identify the respective amounts and remaining time for such assistance.**

See Attachment D.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- d. **Explain how the selected participant's minimum 15 percent contribution is helping to achieve both the selected participant's identified goals and objectives and the overarching goals of the Pilot Program.**

The 15% contribution by IHS for initial participants will help IHS achieve its objectives by allowing it to create health care provider access connections to its backbone network which, as stated in its Application to the RHCPP, "[are] capable of handling multigigabit data transmissions and the bandwidth intensive applications often associated with advanced imaging and diagnostic services." It may also permit the transmission of health care data in other forms such as through the use of continuity of care documents and the creation of a single patient identifier system, and it will grant access to the nationwide networks of NLR and Internet2 for interaction with health care providers across the nation.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**7. Identify any technical or non-technical requirements or procedures necessary for ineligible entities to connect to the participant's network.**

There are no technical or non-technical requirements or procedures necessary for ineligible entities to connect to the backbone network of IHS except for the following:

- a) They must be a health care related entity;
- b) They must be a member of the HealthNet connect, L.C. participant group established to provide and administer access to the IHS backbone network as agent for IHS;
- c) They must pay the full cost of access connection costs, including the upgrade of their equipment. Please note that although the IHS Sustainability Plan ("Attachment D") states that ineligible participants will not be using any portion of the access connections funded under the RHCPP, it is nevertheless possible that an ineligible entity could use a RHCPP funded access connection as long as the ineligible entity pays its fair share of access connection costs attributable to the portion of access connection capacity used by the ineligible entity as required by the RHCPP order; and
- d) They must meet the Quality of Service (QoS) and security (provider edge router) criteria specified in the RFP.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**8. Provide an update on the project management plan, detailing:**

**a. The project's current leadership and management structure and any changes to the management structure since the last data report; and**

IHS will provide project leadership using its existing management structure through its executive management team and its IT Department, which contains more than 200 experienced information technology professionals and currently manages the largest private medical network in the state. IHS will provide project leadership and guidance as well to the participant group that is responsible for administering and providing access to the IHS backbone network as agent for IHS. Moreover, IHS is the largest integrated nonprofit regional health care system in Iowa, serving a geographically dispersed rural population in the upper Midwest. IHS operates facilities in ten large communities in Iowa and two large Illinois supporting a system of rural hospitals in 12 Iowa communities and partnering with numerous physicians and clinics in more than 64 communities in Iowa, Illinois, Nebraska and South Dakota. IHS anticipates the continued utilization of this experience for the leadership, management and execution of this initiative.

The following is the project's current leadership and management structure:

Project Coordinator/ Chief Executive Officer	Bill Leaver, Iowa Health System
Chief Information Officer	Joy Grosser, Iowa Health System
Executive Director	Rodney Brown, Iowa Health System
Assistant Project Coordinator	Stacie Caryl, Iowa Health System
Legal Counsel	Denny Drake, Iowa Health System
	Carey Gehl Supple Iowa Health System

**b. In the first quarterly report, the selected applicant should provide a detailed project plan and schedule. The schedule must provide a list of key project deliverables or tasks, and their anticipated completion dates. Among the deliverables, participants must indicate the dates when each health care provider site is expected to be connected to the network and operational. Subsequent quarterly reports should identify which project deliverables, scheduled for the previous quarter, were met, and which were not met. In the event a project deliverable is not achieved, or the work and deliverables deviate from the work plan, the selected participant must provide an explanation.**

Estimated Project Plan Estimated Timelines / Milestones  
(Updated with each quarterly report to reflect changes / progress of the overall project)

1. 465 / attachments with RFP Bid Package draft complete	5/21/08 Complete
2. Completed bid package sent to USAC for comments / review	5/21/08 Complete
3. Initial healthcare provider ("HCP") orientation meeting in Des Moines	6/5/08 Complete
4. Preliminary USAC comments returned	7/10/08 Complete
5. USAC / FCC Quarterly Report due	7/30/08 Complete
6. Second HCP orientation / governance meeting in Des Moines	9/3/08 Complete
7. IHS project team review and revision complete	9/30/08 Complete
8. Final 465/465 attachments/RFP uploaded for USAC administrative review	10/2/08 Complete
9. Final 465/465 attachments/RFP posted to USAC website	10/6/08 Complete
i. 28 day bid clock starts	
ii. overall project clock starts	
10. First vendor clarification call	10/10/08 Complete
11. Second vendor clarification call	10/24/08 Complete
12. Second Quarterly Report submitted to USAC	10/30/08 Complete
13. Third vendor clarification call	11/12/08 Complete
14. Bid closure / all initial HCP group bids received by IHS review team	11/17/08 Complete
15. Bids analyzed and successful bidders determined	12/19/08 Complete
i. winning bidders notified	
ii. non winning bidders notified	
16. 466A / network worksheets submitted to USAC	3/10/09 Complete
17. Contracts signed with vendors	3/10/09 Complete
18. FCL's issued by USAC to IHS for winning bid Note: ICN FCL issued 4/10/09	3/27/09 Complete
19. Access connection installations begin	3/27/09 Complete
20. Access connections completed for initial participants	6/30/09 Complete
21. Participant applications launch/kickoff	8/15/09 Complete
22. Secondary marketing and sales efforts	1/1/09 – 12/31/09 Complete
23. FCC / USAC award funding years 1 & 2	6/30/09 Complete
24. Public internet product launch	11/1/09 Complete
25. Phase 2 RFP due diligence / prep for additional participants	12/15/09 Complete

26. Phase 2 RFP posting for additional participants	4/13/10 Complete
27. Phase 2 RFP bid closure	6/11/10 Complete
28. FCC / USAC Funding Year 3 complete	6/30/10 Complete
29. Phase 2 RFP bid responses scored and bid awards made to winning vendors	9/7/10 Complete
30. Phase 2 RFP FCLs issued for additional participants	9/30/10 Complete
31. Phase 2 RFP work awarded begins for additional participants	9/30/10 Complete
32. Phase 3 RFP due diligence completed	11/15/10 Complete
33. Phase 2 RFP work complete for additional participants	12/1/10 – 6/15/11 Complete
34. Phase 3 RFP posted to USAC website	1/10/11 Complete
35. Phase 3 RFP bid closure	2/25/11 Complete
36. Phase 3 RFP bid responses scored and bid awards made to winning vendors	4/15/11 Complete
37. Quarterly Report 12 submitted	4/30/11 Complete
38. RHCPP Funding Year 4 (extended year) Complete	6/30/11 Complete
39. Quarterly Report 13 submitted	7/30/11 Complete
40. Phase 3 RFP FCLs issued for Phase 3 participants	8/4/11 Complete
41. Phase 3 field deployment begins for Phase 3 participants	8/15/11 Complete
42. Phase 3 field deployment complete for additional participants	12/30/11 revised*
43. 37 of 38 Phase 3 field deployment complete for additional participants.	12/31/11
44. Final Phase 3 site deployment complete.	9/1/12*

\*These project deliverable dates are different from the previous Quarterly Report due to normal and anticipated changes in the project management workflow.

**9. Provide detail on whether network is or will become self sustaining. Selected participants should provide an explanation of how network is self sustaining.**

See Attachment D.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**10. Provide detail on how the supported network has advanced telemedicine benefits:**



- a. **Explain how the supported network has achieved the goals and objectives outlined in selected participant's Pilot Program application;**
- b. **Explain how the supported network has brought the benefits of innovative telehealth and, in particular, telemedicine services to those areas of the country where the need for those benefits is most acute;**
- c. **Explain how the supported network has allowed patients access to critically needed medical specialists in a variety of practices without leaving their homes or communities;**
- d. **Explain how the supported network has allowed health care providers access to government research institutions, and/or academic, public, and private health care institutions that are repositories of medical expertise and information;**
- e. **Explain how the supported network has allowed health care professional to monitor critically ill patients at multiple locations around the clock, provide access to advanced application in continuing education and research, and/or enhanced the health care community's ability to provide a rapid and coordinated response in the event of a national crisis.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 the public internet product has been launched offering users larger bandwidth at lower cost per megabit than existing alternatives enhancing the capabilities for internet accessed health care applications. Bandwidth is also symmetrical. Users are ordering product as needed and configuring in their local onsite LAN as needed.

As of 3/31/10 numerous HNC participants have fully integrated the HNC Internet product into their local network design configurations.

The "member to member" HNC WAN conversion project plan has concluded individual technology assessments with users and in the upcoming quarter will be configuring all existing "member to member" connections.

A large radiology group (ineligible entity) that serves multiple HNC hospitals is anticipated to join HNC in the upcoming quarter.

Updates will occur in future quarterly reports regarding new vendors joining HNC to make their applications available to HCP's.

A large radiology group and a network provider (both ineligible entities) connected to the HNC network during the reporting period. Both of these entities provide health care or health care related services available to eligible HNC entities

As of September 30, 2012 this response represents no changes from the previous Quarterly Report

**11. Provide detail on how the supported network has complied with HHS health IT initiatives:**

- a. **Explain how the supported network has used health IT systems and products that meet interoperability standards recognized by the HHS Secretary;**
- b. **Explain how the supported network has used health IT products certified by the**

- Certification Commission for Healthcare Information Technology.**
- c. **Explain how the supported network has supported the Nationwide Health Information Network (NHIN) architecture by coordinating activities with organizations performing NHIN trial implementations;**
  - d. **Explain how the supported network has used resources available at HHS's Agency for Information Technology;**
  - e. **Explain how the selected participant has educated themselves concerning the Pandemic and All Hazards Preparedness Act and coordinated with the HHS Assistant Secretary for Public Response as a resource for telehealth inventory and for the implementation of other preparedness and response initiatives; and**
  - f. **Explain how the supported network has used resources available through HHS's Centers for Disease Control and Prevention (CDC) Public Health Information Network (PHIN) to facilitate interoperability with public health and emergency organizations.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 it has not been feasible to coordinate with HHS and CDC due to lack of outlined interoperability standards.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- 12. Explain how the selected participants coordinated in the use of their health care networks with the Department of Health and Human Services (HHS) and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies (e.g., pandemics, bioterrorism). In such instances, where feasible, explain how selected participants provided access to their supported networks to HHS, including CDC, and other public health officials.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 it has not been feasible to coordinate with HHS and CDC due to lack of outlined interoperability standards.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**Pilot Program Quarterly Report of Iowa Health System**  
**Period 7/1/12-9/30/12**  
**WC Docket No. 02-60**

**1. Project Contact and Coordination Information**

**a. Identify the project leader(s) and respective business affiliations.**

Bill Leaver, President and CEO  
Iowa Health System

**b. Provide a complete address for postal delivery and the telephone, fax, and e-mail address for the responsible administrative official.**

Bill Leaver  
President and CEO  
Iowa Health System  
1776 West Lakes Parkway,  
Suite 400  
West Des Moines, IA 50266  
Telephone: 515-241-6347  
Fax: 515-241-5712  
E-mail: LeaverWB@ihs.org

**c. Identify the organization that is legally and financially responsible for the conduct of activities supported by the award.**

Iowa Health System  
1776 West Lakes  
Parkway, Suite 400  
West Des Moines, IA  
50266

**d. Explain how project is being coordinated throughout the state or region.**

The project is being coordinated by Iowa Health System ("IHS") leadership in consultation with Fiberutilities Group LLC.

After identifying potential participants and attending RHCPP training, IHS met with potential participants in the region. As a result of that meeting, IHS received letters of agency from 29 initial participants.

A meeting of initial participants was held in Des Moines, Iowa on June 5, 2008 to discuss the project as well as a proposed governance structure that emphasizes participant input into the project's operations. A second meeting of this group was held September 3, 2008 in Des Moines. Since that date, the group has also met on April 2, 2009, June 3, 2009 and July 15, 2009. Going forward, the group intends to meet on at least a monthly basis either in person, by video conference, or by teleconference. This group will play a central role in the governance and operation of the project to ensure that it best meets participants' needs.

A RFP for 15 year lit capacity IRUs for access to the IHS backbone network was issued on October 6, 2008 with bid closure on November 17, 2008. Bid responses to the RFP were received from 10 vendors. All bid response data was compiled, analyzed, and scored resulting in the selection of vendors for final contract negotiation. IHS entered into IRU agreements with MCC Telephony, L.L.C. and the Iowa Communications Network on March 10, 2009.

One eligible participant, Grinnell Regional Medical Center, opted to not participate in

phase one deployment and was subsequently removed from the FCC support request. IHS continues to identify and meet other potential participants whom IHS anticipates will join the project in future deployment phases.

The 466A, 466A attachments, vendor certification form, Network Cost Worksheets and other required paperwork and response information was uploaded to USAC for processing. A Funding Commitment Letter was issued for MCC Telephony, L.L.C. on March 27, 2009 and a Funding Commitment Letter for the Iowa Communications Network was issued on April 13, 2009. All paperwork is on file with the USAC.

A pre-launch participant meeting was held in Des Moines, Iowa on April 2, 2009 to update participants on status and continuing to prepare for initial network usage when completed. All initial participants signed the paperwork necessary to belong to HealthNet connect, L.C., who as agent for IHS provides and administers the RHCPP last mile connections to the IHS network. A press conference announcing the network launch to the public was held in Des Moines, Iowa on April 14, 2009, at which Tom Buckley, the Deputy Division Chief of the Telecommunications Access Policy Division of the FCC's Wireline Competition Bureau was present and spoke.

All last mile connections for initial participants were completed, tested, and accepted by mid July 2009. Internet 2 invoice requirements were submitted and all payments made. Two invoices for MCC Telephony (sc) and one invoice for the Iowa Communications have been paid in full. All paperwork is on file with USAC

Local customer edge routers are the final step toward connectivity to the network and are provided by the participants at the participant's expense. Ninety percent of initial participants' routers have been procured, installed and configured as of this Quarterly Report.

The governing board meets monthly to discuss the status of the project, discuss potential new members, announce new applications available to participants over the network, and maintain an ongoing planning dialog related to future application rollouts to improve health care, particularly in rural areas.

It is anticipated that the second RFP will be prepared prior to the end of calendar year 2009.

Update: The second RFP is anticipated to be posted in the first quarter of 2010.

The second RFP and associated paperwork was at USAC as of 3/31/10 with responses to USAC questions. As of that date the RFP has not yet been posted.

The Phase 2 RFP was posted to the USAC site on April 13<sup>th</sup>, 2010 with a bid closing date of June 11<sup>th</sup>, 2010. As of June 11<sup>th</sup>, 2010, bid responses had been received from 7 vendors covering 35 of the 41 locations offered for bid. Bids were in the process of being analyzed and scored as of June 30<sup>th</sup>, 2010. No awards were made as of June 30<sup>th</sup>, 2010 although it is anticipated that numerous Phase 2 RFP awards will be made by mid July 2010.

Funding Commitment Letters for Phase 2 were issued by USAC on September 30<sup>th</sup>, 2010. This added an additional 30 members to the network leaving only 1 remaining Phase 2 participant still in the contract negotiation phase. Total active or "in process under FCL" participants in HNC as of October 1<sup>st</sup>, 2010 will total 59 leaving 19 participants to process in Phase 3 to complete the project.

Phase 2 deployment began in December of 2010. As of 12/31/10, three new sites were physically connected from the Phase 2 group and are currently in the invoicing process

with USAC.

It was anticipated that a Phase 3 RFP will be issued by the end of 2010 to complete the

The Phase 3 RFP (final HNC phase) was posted on January 10, 2011 and closed on February 25, 2011. The RFP received responses from 11 bidders. There were a total of 68 eligible sites available for bid and responses were received for 56 of those sites. All bids were subsequently scored using the criteria outlined in the RFP. Because this was the last phase of HNC and the budget was finite there were more bids received than available funds to do all sites. A total of 38 sites were selected and all documentation (RFP responses, bid scoring, and site selection) were submitted to USAC for their final review prior to awarding to winning bidders. It is anticipated that awards will be made and final contracts be awarded in the upcoming reporting period.

Phase 2 of HNC continued deployment with all sites except five being completed (connection tested and accepted) during this reporting period. The vendor and USAC invoicing process are underway on all completed sites. It is anticipated that the remaining five Phase 2 sites will be completed in the upcoming reporting period.

HNC added two ineligible users (Iowa Radiology and Lightedge Networks) to the network during the reporting period. Both ineligible users provided 100% of the cost of their access connection to the HNC core network.

As of the current reporting period all Phase 2 sites have been completed and are on line.

As of the end of this reporting period, 38 Phase 3 sites have received FCL's and are in the process of being deployed. A total of two sites experienced minor address changes due to physical moves and one site required substitution for another site. The new site was also originally listed on the Phase 3 465 attachment.

Letters of explanation updated LOA's and vendor contract addendums reflecting these changes were submitted to USAC for review and approval in mid October.

---

It is anticipated that substantively all Phase 3 sites will be fully deployed and through the billing process by the end of the upcoming reporting period.

A HNC user technical forum was created to discuss technical issues as well as application related knowledge sharing. This forum was launched in July of 2011. This user forum allows IT leadership from HNC participants to share successful deployment of new applications as well as provide support for each other in resolving any application related issues. The forum may be accessed by hitting the Forum tab on the HNC website ([www.healthnetconnect.org](http://www.healthnetconnect.org)).

Further updates and relevant details will follow in subsequent Quarterly Reports as new participants come online and health care-related applications are launched.

As of the end of this reporting period, 37 of the 38 Phase 3 sites were fully deployed. It is anticipated that 37 of the 38 Phase 3 sites will be complete through the billing process by the end of the upcoming reporting period.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the end of the fourth quarter, 2012.

**2. Identify all health care facilities included in the network.**

- a. Provide address (including county), zip code, Rural Urban Commuting Area (RUCA) code (including primary and secondary), six-digit census tract, and phone number for each health care facility participating in the network.**
- b. For each participating institution, indicate whether it is:**
  - i. Public or non-public;**
  - ii. Not-for-profit or for-profit;**
  - iii. An eligible health care provider or ineligible health care provider with an explanation of why the health care facility is eligible under section 254 of the 1996 Act and the Commission's rules or a description of the type of ineligible health care provider entity.**

See revised Attachment A. The 28 entities listed in Attachment A are eligible participants who have signed a letter of agency with IHS. Of those 28 eligible institutions, 26 are receiving RHCPP funding support as part of the phase one installation process. The remaining two eligible entities are not receiving funding support at the time of this report.

Note: The eligible health care providers are eligible because they are nonprofit hospitals under 47 U.S.C. Section 254(h) (7) (B).

As of December 31st, 2009 one eligible entity (that did NOT receive FCC funding support) has opted to no longer participate in. Mercer County Hospital, Aledo, Illinois, is no longer a member.

The Phase 2 RFP closed on June 30<sup>th</sup> 2010, and as of that date, no awards to add new participants to the network were made.

See revised Attachment A1 (supersedes Attachment A) outlining pre existing HNc members as well as 30 participants receiving FCL on September 30<sup>th</sup>, 2010. Total HNc active or under "in process under FCL" participation stands at 59 participants.

There were 3 additional sites physically connected to HNc from Phase 2 as of 12/31/10.

A total of 25 Phase 2 participants have been physically connected to the network as of March 31, 2011 leaving five remaining Phase 2 sites to complete in the upcoming reporting period.

See revised Attachment A1 outlining all Phase 1 and Phase 2 HNc participants which identifies completed sites and ineligible users fully deployed at the end of the reporting period.

See revised Attachment A2 outlining all Phase 3 HNc participants under FCL including substitution and address changes currently under USAC review. .

It is anticipated that substantively all Phase 3 sites will be fully deployed and through the billing process by the end of the upcoming reporting period.

On November 16<sup>th</sup>, 2011, USAC approved the 3 substitution/address changes that were submitted during the last reporting period. As of the end of this reporting period, 37 of the 38 Phase 3 sites were fully deployed. It is anticipated that 37 of the 38 Phase 3 sites will be complete through the billing process by the end of the upcoming reporting period.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the end of the fourth quarter, 2012.



**3. Network Narrative: In the first quarterly report following the completion of the competitive bidding process and the selection of vendors, the selected participant must submit an updated technical description of the communications network that it intends to implement, which takes into account the results of its network design studies and negotiations with its vendors. This technical description should provide, where applicable:**

- a. Brief description of the backbone network of the dedicated health care network, e.g., MPLS network, carrier-provided VPN, a SONET ring;**

The combination of the access connections and the IHS-owned backbone network is a private fiber network equipped with Layer 2 (Ethernet) transport equipment and Layer 3 (packets) core routers. (See Attachment B). The network will be connected to National Lambda Rail ("NLR") and Internet 2. The network is currently lit to 2 Gbps of total capacity and can grow to 10Gbps by inserting small form pluggable (SFP) optics into existing 10 lambda CWDM muxes/demuxes at the appropriate equipment locations in the network.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- b. Explanation of how health care provider sites will connect to (or access) the network, including the access technologies/services and transmission speeds;**

The access connections to the IHS-owned backbone network will be a fiber-based transparent LAN solution providing symmetrical 100Mbps of Ethernet connectivity using Gigabit Ethernet Passive Optical Network (GEAPON) technology to the premise. The Layer 2 Ethernet solution will support VoIP, 802.1 Q VLAN tagging, and video streaming, in addition to data transport.

It is anticipated that additional participants will connect to a centralized router in the IHS backbone network via a direct build fiber or carrier access facilities.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- c. Explanation of how and where the network will connect to a national backbone such as NLR or Internet 2;**

The network will connect to NLR and Internet 2 via the Metropolitan Research and Education Network ("MREN") located at Northwestern University in Chicago. The connections will be a 1 gigabit per second interface with MREN's shared lit fiber access to NLR and Internet 2. 466A related funding support documents for Internet 2 membership dues were submitted to USAC on April 9, 2009 for review and processing.

Internet 2 and NLR connectivity has been completed and tested. Participants who have completed their Customer Edge Router configurations have access to I2 / NLR network endpoints.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**d. Number of miles of fiber construction, and whether the fiber is buried or aerial;**

The RFP for access to the IHS-owned backbone network requested a 15 year lit capacity IRU for 100 Mbs symmetrical Ethernet. No fiber construction using RHCPP funds is anticipated to deliver the access connections to the initial group of eligible participants connecting to the network.

It is anticipated that some future sites will involve some direct fiber builds. Those fiber construction elements would be reported in subsequent Quarterly Reports.

Now that all three phases of HNC are nearing completion it is apparent that all access connections to the HNC core will consist of 15 year lit capacity IRU's with capacity of 10, 30 or 100 Mbps.

As of September 30, 2011 this response represents no changes from the previous Quarterly Report.

As of December 31, 2011, we can confirm that all access connections to the HNC core will consist of 15 year lit capacity IRU's with capacity of 10, 30 or 100 Mbps.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**e. Special systems or services for network management or maintenance (if applicable) and where such systems reside or are based.**

Layer 3 network management will be accomplished by a provider edge router on the participant's premise located at the end of the provider's connection. It will be managed by IHS. All other management and maintenance of equipment related to the access connection will be provided by the vendor providing the 15 year lit capacity IRU.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**4. List of Connected Health Care Providers: Provide information below for all eligible and non-eligible health care provider sites that, as of the close of the most recent reporting period, are connected to the network and operational.**

- a. Health care provider site;**
- b. Eligible provider (Yes/No);**
- c. Type of network connection (e.g., fiber, copper, wireless);**
- d. How connection is provided (e.g., carrier-provided service; self-constructed; leased facility);**
- e. Service and/or speed of connection (e.g., DS1, DS3, DSL, OC3, Metro Ethernet (10 Mbps);**
- f. Gateway to NLR, Internet2, or the Public Internet (Yes/No);**
- g. Site Equipment (e.g., router, switch, SONET ADM, WDM) including manufacturer name and model number.**
- h. Provide a logical diagram or map of the network.**

The access connections related to this network have not been completed at the time covered by this Quarterly Report (April 1, 2009 through June 30, 2009), however construction / configuration was underway with substantial completion anticipated by June 30, 2009. Accordingly, as of the close of the most recent reporting period, there were no "Connected Health Care Providers" connected to the network and operational. Attachment C is a map of the proposed network. (See also Attachment B for a logical

diagram of the access connections.)

During the period April 1, 2009 through June 30, 2009 a total of 14 members had their access connection completed, tested, and accepted. The remaining members were completed, tested and accepted by July 23, 2009. See Attachment B for a logical diagram of the access connections.

See revised Attachments A and C indicating eligible participants connected as of March 31, 2011.

See revised Attachments A1, C, C1 indicating eligible and ineligible participants connected or "in process under FCL" as of March 31, 2011.

Attachments A2 and C2 outline the Phase 3 participants under FCL that will be deployed by the end of the upcoming reporting period.

As of December 31, 2011 USAC approved 3 address changes. Additional documentation regarding the address changes was previously provided and the attachments reflect the corrected address changes.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**5. Identify the following non-recurring and recurring costs,<sup>423</sup> where applicable shown both as budgeted and actually incurred for the applicable quarter and funding year-to-date.**

**a. Network Design**

Network design was funded by IHS, independent of the RHCPP and cost recovery for design costs will not be sought through that program.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

---

<sup>423</sup>Non-recurring costs are flat charges incurred only once when acquiring a particular service or facility. Recurring costs are costs that recur, typically on a monthly basis, because they vary with respect to usage or length of service contract.

**b. Network Equipment, including engineering and installation**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of the December 31, 2011, deployment of 37 of the 38 Phase 3 sites was complete.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the first part of the fourth quarter, 2012.

**c. Infrastructure Deployment/Outside Plant**

**i. Engineering**

**ii. Construction**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet

Actual costs for participants “in process under FCL” as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is is anticipated that FCL’s will be issued by August 15, 2011.

Phase 3 HCP FCL’s were issued in this reporting period and sites are in active deployment mode.

As of the December 31, 2011, deployment was complete for 37 of the 38 Phase 3 sites.

As of the end of this report period, it is anticipated that the 38<sup>th</sup>, and final, Phase 3 site will be complete through the invoicing process as of the first part of the fourth quarter, 2012.

**d. Internet2, NLR, or Public Internet Connection**

As of December 31st, 2009 Internet 2 and NLR are fully functional and all initial participants who have their customer edge router configured have access to all I2 / NLR network endpoints. The actual recurring cost for interconnecting to Internet2 is \$25,000. The actual recurring cost of interconnecting to MREN is \$28,800. Both of these costs are budgeted for future years. Public internet capability design, testing and user launch was completed in November 2009. Through December 31<sup>st</sup> 2009 a total of ten (ten) users ordered public internet connections ranging from 10 to 50 megabits in size. Users continue to integrate Internet into their onsite LAN designs and security configurations.

As of September 30<sup>th</sup> 2010 Internet 2 and MREN contracts for HNC have been renewed for current program year.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

As of June 30, 2011 the upcoming period Internet 2 annual renewal has been processed and an FCL has been issued.

This response represents no changes from the previous Quarterly Report

As of September 30, 2012, this response represents no changes from the previous Quarterly Report.

**e. Leased Facilities or Tariffed Services**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants "in process under FCL" as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL's will be issued by August 15, 2011.

Phase 3 HCP FCL's were issued in this reporting period and sites are in active deployment mode.

As of September 30, 2012, deployment was complete for 37 of the 38 Phase 3 sites.

**f. Network Management, Maintenance, and Operation Costs (not captured elsewhere)**

See Attachment D for budgeted costs. Actual costs for participants who received FCL in phase one are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

Actual costs for participants "in process under FCL" as of September 30<sup>th</sup> 2010 are on file at USAC in the form of 466A attachment and Network Cost Worksheet.

As of March 31, 2011 this response represents no changes from the previous Quarterly Report.

Phase 3 participant costs will be calculated and reported via 466A and the Network Cost Worksheet in the upcoming reporting period.

Phase 3 paperwork is in process with USAC at the beginning of the new reporting period and is anticipated that FCL's will be issued by August 15, 2011.

Phase 3 HCP FCL's were issued in this reporting period and sites are in active deployment mode.

As of June 30, 2012, deployment was complete for all of of the 38 Phase 3 sites.

**g. Other Non-Recurring and Recurring Costs**

There are no other non-recurring or recurring costs related to the access connections as of this Quarterly Reporting period.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**6. Describe how costs have been apportioned and the sources of the funds to pay them:**

**a. Explain how costs are identified, allocated among, and apportioned to both eligible and ineligible network participants.**

Ineligible participants must fund 100% of their cost to access the backbone network of IHS. Eligible entities connecting in the first phase of deployment will have 15% of their access costs funded by IHS and 85% funded by the RHCPP. IHS is funding 100% of the capital, maintenance, and operational costs of the backbone network. Thus, no cost allocation is required between eligible and ineligible entities for backbone network costs.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**b. Describe the source of funds from:**

- i. Eligible Pilot Program network participants**
- ii. Ineligible Pilot Program network participants**

See Attachment D.

As of June 30, 2012 this response represents no changes from the previous Quarterly Report.

**c. Show contributions for all other sources (e.g., local, state, and federal sources,**



and other grants).

- i. **Identify source of financial support and anticipated revenues that is paying for costs not covered by the fund and by Pilot Program participants.**
- ii. **Identify the respective amounts and remaining time for such assistance.**

See Attachment D.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- d. **Explain how the selected participant's minimum 15 percent contribution is helping to achieve both the selected participant's identified goals and objectives and the overarching goals of the Pilot Program.**

The 15% contribution by IHS for initial participants will help IHS achieve its objectives by allowing it to create health care provider access connections to its backbone network which, as stated in its Application to the RHCPP, "[are] capable of handling multigigabit data transmissions and the bandwidth intensive applications often associated with advanced imaging and diagnostic services." It may also permit the transmission of health care data in other forms such as through the use of continuity of care documents and the creation of a single patient identifier system, and it will grant access to the nationwide networks of NLR and Internet2 for interaction with health care providers across the nation.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**7. Identify any technical or non-technical requirements or procedures necessary for ineligible entities to connect to the participant's network.**

There are no technical or non-technical requirements or procedures necessary for ineligible entities to connect to the backbone network of IHS except for the following:

- a) They must be a health care related entity;
- b) They must be a member of the HealthNet connect, L.C. participant group established to provide and administer access to the IHS backbone network as agent for IHS;
- c) They must pay the full cost of access connection costs, including the upgrade of their equipment. Please note that although the IHS Sustainability Plan ("Attachment D") states that ineligible participants will not be using any portion of the access connections funded under the RHCPP, it is nevertheless possible that an ineligible entity could use a RHCPP funded access connection as long as the ineligible entity pays its fair share of access connection costs attributable to the portion of access connection capacity used by the ineligible entity as required by the RHCPP order; and
- d) They must meet the Quality of Service (QoS) and security (provider edge router) criteria specified in the RFP.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**8. Provide an update on the project management plan, detailing:**

- a. The project's current leadership and management structure and any changes to the management structure since the last data report; and**

IHS will provide project leadership using its existing management structure through its executive management team and its IT Department, which contains more than 200 experienced information technology professionals and currently manages the largest private medical network in the state. IHS will provide project leadership and guidance as well to the participant group that is responsible for administering and providing access to the IHS backbone network as agent for IHS. Moreover, IHS is the largest integrated nonprofit regional health care system in Iowa, serving a geographically dispersed rural population in the upper Midwest. IHS operates facilities in ten large communities in Iowa and two large Illinois supporting a system of rural hospitals in 12 Iowa communities and partnering with numerous physicians and clinics in more than 64 communities in Iowa, Illinois, Nebraska and South Dakota. IHS anticipates the continued utilization of this experience for the leadership, management and execution of this initiative.

The following is the project's current leadership and management structure:

Project Coordinator/ Chief Executive Officer	Bill Leaver, Iowa Health System
Chief Information Officer	Joy Grosser, Iowa Health System
Executive Director	Rodney Brown, Iowa Health System
Assistant Project Coordinator	Stacie Caryl, Iowa Health System
Legal Counsel	Denny Drake, Iowa Health System
	Carey Gehl Supple Iowa Health System

- b. In the first quarterly report, the selected applicant should provide a detailed project plan and schedule. The schedule must provide a list of key project deliverables or tasks, and their anticipated completion dates. Among the deliverables, participants must indicate the dates when each health care provider site is expected to be connected to the network and operational. Subsequent quarterly reports should identify which project deliverables, scheduled for the previous quarter, were met, and which were not met. In the event a project deliverable is not achieved, or the work and deliverables deviate from the work plan, the selected participant must provide an explanation.**

**Estimated Project Plan Estimated Timelines / Milestones  
(Updated with each quarterly report to reflect changes / progress of the overall project)**

1. 465 / attachments with RFP Bid Package draft complete	5/21/08 Complete
2. Completed bid package sent to USAC for comments / review	5/21/08 Complete
3. Initial healthcare provider ("HCP") orientation meeting in Des Moines	6/5/08 Complete
4. Preliminary USAC comments returned	7/10/08 Complete
5. USAC / FCC Quarterly Report due	7/30/08 Complete
6. Second HCP orientation / governance meeting in Des Moines	9/3/08 Complete
7. IHS project team review and revision complete	9/30/08 Complete
8. Final 465/465 attachments/RFP uploaded for USAC administrative review	10/2/08 Complete
9. Final 465/465 attachments/RFP posted to USAC website	10/6/08 Complete
i. 28 day bid clock starts	
ii. overall project clock starts	
10. First vendor clarification call	10/10/08 Complete
11. Second vendor clarification call	10/24/08 Complete
12. Second Quarterly Report submitted to USAC	10/30/08 Complete
13. Third vendor clarification call	11/12/08 Complete
14. Bid closure / all initial HCP group bids received by IHS review team	11/17/08 Complete
15. Bids analyzed and successful bidders determined	12/19/08 Complete
i. winning bidders notified	
ii. non winning bidders notified	
16. 466A / network worksheets submitted to USAC	3/10/09 Complete
17. Contracts signed with vendors	3/10/09 Complete
18. FCL's issued by USAC to IHS for winning bid Note: ICN FCL issued 4/10/09	3/27/09 Complete
19. Access connection installations begin	3/27/09 Complete
20. Access connections completed for initial participants	6/30/09 Complete
21. Participant applications launch/kickoff	8/15/09 Complete
22. Secondary marketing and sales efforts	1/1/09 – 12/31/09 Complete
23. FCC / USAC award funding years 1 & 2	6/30/09 Complete
24. Public internet product launch	11/1/09 Complete
25. Phase 2 RFP due diligence / prep for additional participants	12/15/09 Complete

26. Phase 2 RFP posting for additional participants	4/13/10 Complete
27. Phase 2 RFP bid closure	6/11/10 Complete
28. FCC / USAC Funding Year 3 complete	6/30/10 Complete
29. Phase 2 RFP bid responses scored and bid awards made to winning vendors	9/7/10 Complete
30. Phase 2 RFP FCLs issued for additional participants	9/30/10 Complete
31. Phase 2 RFP work awarded begins for additional participants	9/30/10 Complete
32. Phase 3 RFP due diligence completed	11/15/10 Complete
33. Phase 2 RFP work complete for additional participants	12/1/10 – 6/15/11 Complete
34. Phase 3 RFP posted to USAC website	1/10/11 Complete
35. Phase 3 RFP bid closure	2/25/11 Complete
36. Phase 3 RFP bid responses scored and bid awards made to winning vendors	4/15/11 Complete
37. Quarterly Report 12 submitted	4/30/11 Complete
38. RHCPP Funding Year 4 (extended year) Complete	6/30/11 Complete
39. Quarterly Report 13 submitted	7/30/11 Complete
40. Phase 3 RFP FCLs issued for Phase 3 participants	8/4/11 Complete
41. Phase 3 field deployment begins for Phase 3 participants	8/15/11 Complete
42. Phase 3 field deployment complete for additional participants	12/30/11 revised*
43. 37 of 38 Phase 3 field deployment complete for additional participants.	12/31/11
44. Final Phase 3 site deployment complete.	9/1/12*

\*These project deliverable dates are different from the previous Quarterly Report due to normal and anticipated changes in the project management workflow.

**9. Provide detail on whether network is or will become self sustaining. Selected participants should provide an explanation of how network is self sustaining.**

See Attachment D.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

**10. Provide detail on how the supported network has advanced telemedicine benefits:**

- a. **Explain how the supported network has achieved the goals and objectives outlined in selected participant's Pilot Program application;**
- b. **Explain how the supported network has brought the benefits of innovative telehealth and, in particular, telemedicine services to those areas of the country where the need for those benefits is most acute;**
- c. **Explain how the supported network has allowed patients access to critically needed medical specialists in a variety of practices without leaving their homes or communities;**
- d. **Explain how the supported network has allowed health care providers access to government research institutions, and/or academic, public, and private health care institutions that are repositories of medical expertise and information;**
- e. **Explain how the supported network has allowed health care professional to monitor critically ill patients at multiple locations around the clock, provide access to advanced application in continuing education and research, and/or enhanced the health care community's ability to provide a rapid and coordinated response in the event of a national crisis.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 the public internet product has been launched offering users larger bandwidth at lower cost per megabit than existing alternatives enhancing the capabilities for internet accessed health care applications. Bandwidth is also symmetrical. Users are ordering product as needed and configuring in their local onsite LAN as needed.

As of 3/31/10 numerous HNC participants have fully integrated the HNC Internet product into their local network design configurations.

The "member to member" HNC WAN conversion project plan has concluded individual technology assessments with users and in the upcoming quarter will be configuring all existing "member to member" connections.

A large radiology group (ineligible entity) that serves multiple HNC hospitals is anticipated to join HNC in the upcoming quarter.

Updates will occur in future quarterly reports regarding new vendors joining HNC to make their applications available to HCP's.

A large radiology group and a network provider (both ineligible entities) connected to the HNC network during the reporting period. Both of these entities provide health care or health care related services available to eligible HNC entities

As of September 30, 2012 this response represents no changes from the previous Quarterly Report

#### **11. Provide detail on how the supported network has complied with HHS health IT initiatives:**

- a. **Explain how the supported network has used health IT systems and products that meet interoperability standards recognized by the HHS Secretary;**
- b. **Explain how the supported network has used health IT products certified by the**

- Certification Commission for Healthcare Information Technology.**
- c. **Explain how the supported network has supported the Nationwide Health Information Network (NHIN) architecture by coordinating activities with organizations performing NHIN trial implementations;**
  - d. **Explain how the supported network has used resources available at HHS's Agency for Information Technology;**
  - e. **Explain how the selected participant has educated themselves concerning the Pandemic and All Hazards Preparedness Act and coordinated with the HHS Assistant Secretary for Public Response as a resource for telehealth inventory and for the implementation of other preparedness and response initiatives; and**
  - f. **Explain how the supported network has used resources available through HHS's Centers for Disease Control and Prevention (CDC) Public Health Information Network (PHIN) to facilitate interoperability with public health and emergency organizations.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 it has not been feasible to coordinate with HHS and CDC due to lack of outlined interoperability standards.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.

- 12. Explain how the selected participants coordinated in the use of their health care networks with the Department of Health and Human Services (HHS) and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies (e.g., pandemics, bioterrorism). In such instances, where feasible, explain how selected participants provided access to their supported networks to HHS, including CDC, and other public health officials.**

Construction of the access connections related to this network had begun but had not completed during the ending time period covered by the prior Quarterly Report (March 31, 2009). Accordingly, there are no advanced telemedicine benefits to report at this time.

Physical access connections were completed at the time of this Quarterly Report. It is IHS's belief the initial launch of selected applications will commence soon.

As of December 31st, 2009 it has not been feasible to coordinate with HHS and CDC due to lack of outlined interoperability standards.

As of September 30, 2012 this response represents no changes from the previous Quarterly Report.



[illegible]

••Both HCP's are located at the same physical address.

**••Both HCP's are located at the same physical address**

## HNC Phase 3 Vendor Responses

Health Net connect - Phase 3 Users	
Allison Family Practice, 502 Locust St., Allison, IA 50602	
Antia Medical Center, 720 Main St., Antia, IA 50020	
Aplington/Parkersburg Family Practice, 502 3rd St., Parkersburg, IA 50665	
Belle Plaine Family Medicine, 1010 8th Ave, Belle Plaine, IA 52208	
Boone Family Practice, 120 S. Story St., Boone, IA 50036	
Cedarlea Family Practice, 2624 Orchardry, Cedar Falls, IA, 50613	
Clarke County Family Medicine, 827 S. Jackson St., Osceola, IA 50213	
Denver Family Practice, 160 E. Main St., Denver, IA 50602	
Family Practice Associates, 1030 5th Ave. SE, suite 1400, Cedar Rapids, IA 52403	
Grundy Center Family Practice, 101 East I Ave., suite 120, Grundy Center, IA 50638	
Gruthrie County Hospital Family Medicine - Adair, 401 Audubon St., Adair, IA 50002	
Huskey Family Physicians, 305 S. Highway 69, Huxley, IA 50124	
Indiana Family Medicine, 301 E. Hillcrest, Indiana, IA 50125	
Ingersoll Family Physicians, 2103 Ingersoll Ave., Des Moines, IA 50312	
Iowa Health Des Moines La Clinica, 2679 Maury St., Des Moines, IA 50317	
Johnston Family Physicians, 5900 NW 86th St., suite 100, Johnston, IA 50131	
Linn Community Care, 1301 3rd Ave. SE, Cedar Rapids, IA 52403	
Massena Medical Center, 92 Main St., Massena, IA 50853	
Montecello Family Practice, 740 E Oak St., Monticello, IA 52310	
Myrtue Medical Center - Avoca Clinic, 510 N. Elm St., Avoca, IA 51521	
Myrtue Medical Center - Shelby Clinic, 301 E St., Shelby, IA 51570	
Norwalk Family Physicians, 801 Colonial Circle, Norwalk, IA 50211	
Osweeth Family Medicine, 124 1st Ave. SE, Osweeth, IA 50662	
Ottumwa Family Practice & Specialists, 623 Pennsylvania Ave. Ottumwa, IA 52501	
Prairie Medical Park Urgent Care, 4612 Prairie Pkwy, suite 100, Cedar Falls, IA 50613	
River Hills Community Health Center Keokuk County Clinic, 100 W. Main, Richard, IA 52585	
River Ridge Children's Specialty, 4050 River Ridge Dr. NE, Cedar Rapids, IA 52402	
Rohlf Memorial Clinic, 312 8th St. SW, suite 1200, Waverly, IA 50567	
Sargeant Bluff Family Medicine Clinic - Sargeant Bluff, IA 51054	
Southwest Family Physicians, 4821 SW 8th St., Des Moines, IA 50315	
St. Luke's Writner Children's Therapy, 3245 Williams Pkwy. SW, Cedar Rapids, IA 52404	
St. Luke's Wound Healing Center and Family Health Center, 4251 River Center CLINE, Cedar Rapids, IA 52402	
Tipton Family Medical Center, 1412 Cedar St., Tipton, IA 52772	
Trinity Coal Valley Clinic, 104 W. 18th Ave., Coal Valley, IL 61240-9337	
Trinity Express Care-East Moline, 465 Avenue of the Cities, suites 100 and 103, East Moline, IL 61244-4004	
Trinity Family Care, 5359 Eastern Ave., Davenport, IA 52807	
St. Lukes Chemical Dependency, 1030 5th Avenue SE, suite 100, Cedar Rapids, Iowa 52403	
Vinton Family Practice, 1803 C Ave., Vinton, IA 52349	

ATTACHMENT B - HealthNet connect (HNC) Access Connection Specification

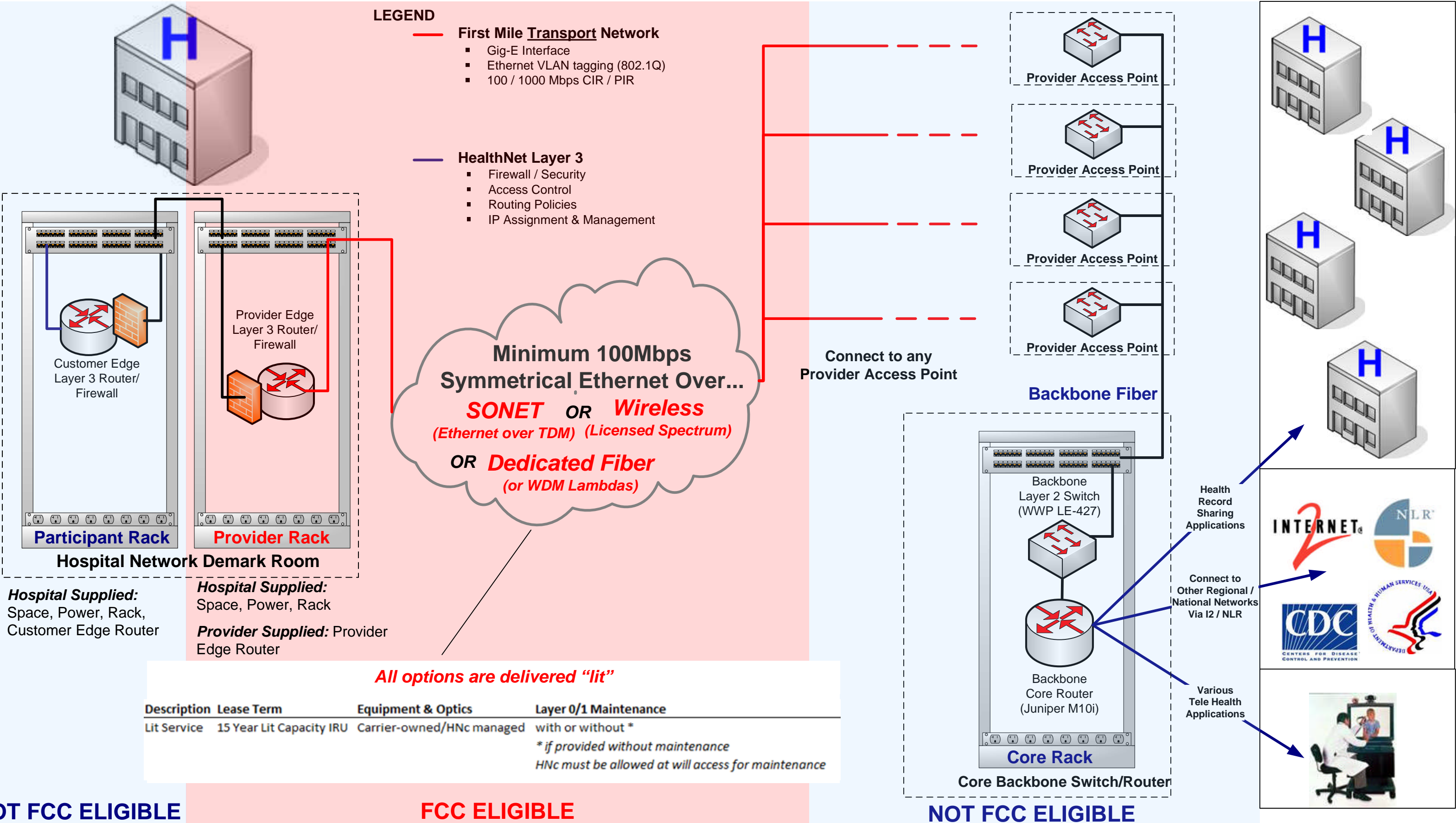
Hospital

HealthNet connect Access Connection

Core Fiber Backbone Network

LEGEND

- First Mile Transport Network
  - Gig-E Interface
  - Ethernet VLAN tagging (802.1Q)
  - 100 / 1000 Mbps CIR / PIR
- HealthNet Layer 3
  - Firewall / Security
  - Access Control
  - Routing Policies
  - IP Assignment & Management



Hospital Supplied:  
Space, Power, Rack,  
Customer Edge Router

Hospital Supplied:  
Space, Power, Rack  
Provider Supplied: Provider  
Edge Router

All options are delivered "lit"

Description	Lease Term	Equipment & Optics	Layer 0/1 Maintenance
Lit Service	15 Year Lit Capacity IRU	Carrier-owned/HNc managed	with or without *
* if provided without maintenance HNc must be allowed at will access for maintenance			

NOT FCC ELIGIBLE

FCC ELIGIBLE

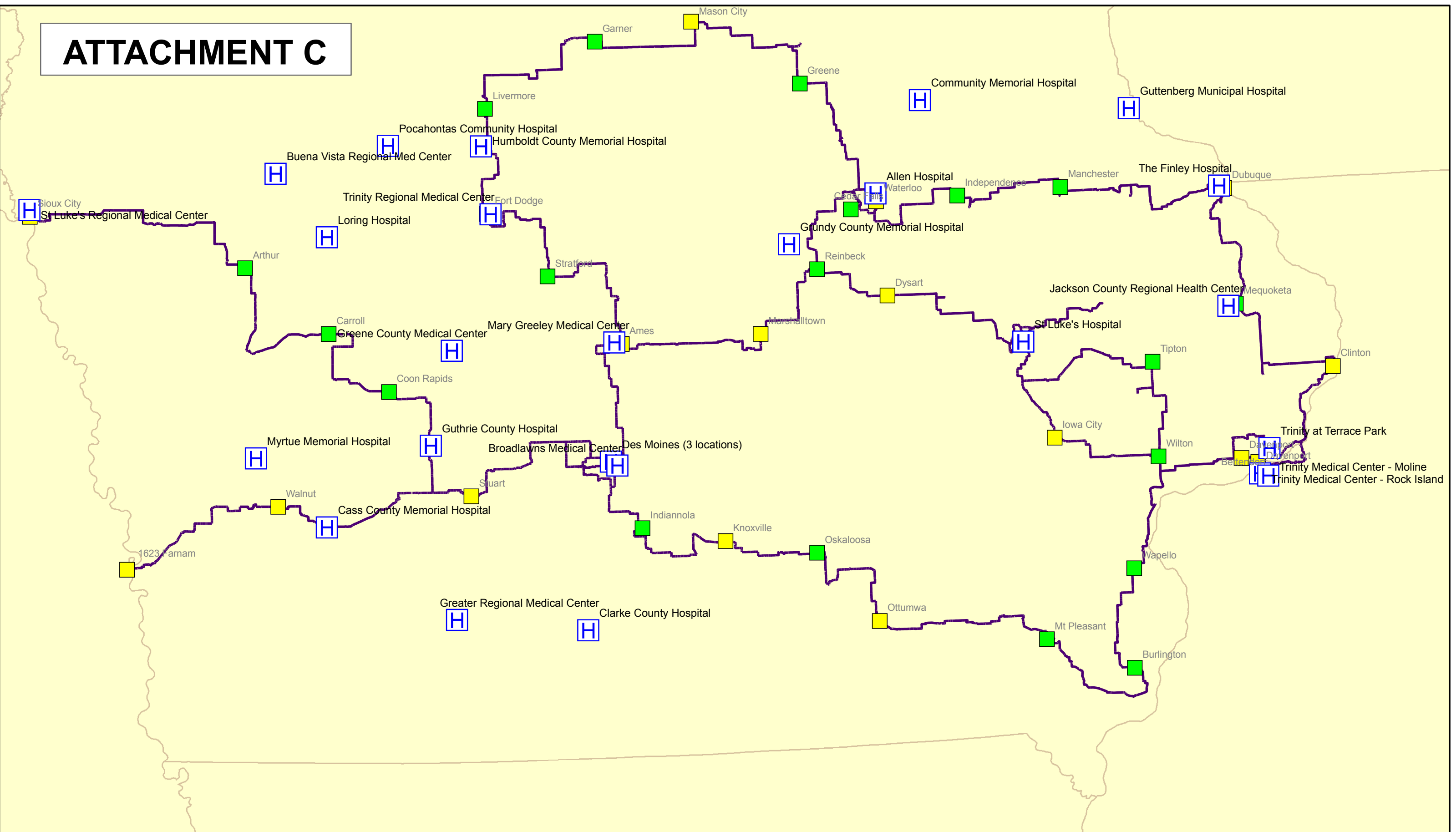
NOT FCC ELIGIBLE

Gerald Horst	HealthNet	Rev #: 4.0
Sales Engineer	First Mile Specifications	08-13-08
Proprietary & Confidential		

222 3rd Ave, SE  
Suite 500  
Cedar Rapids, IA 52401  
(319) 364-3200  
(319) 364-8100 (f)  
www.fiberutilities.com

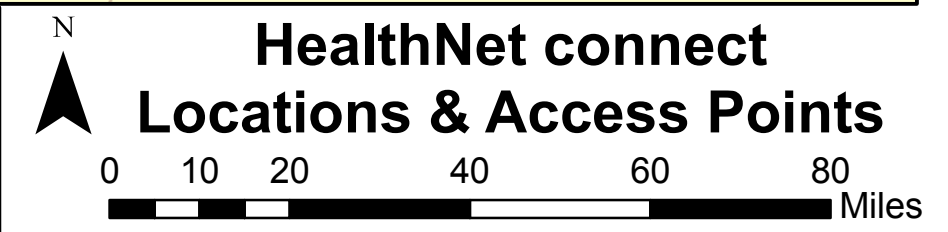


# ATTACHMENT C

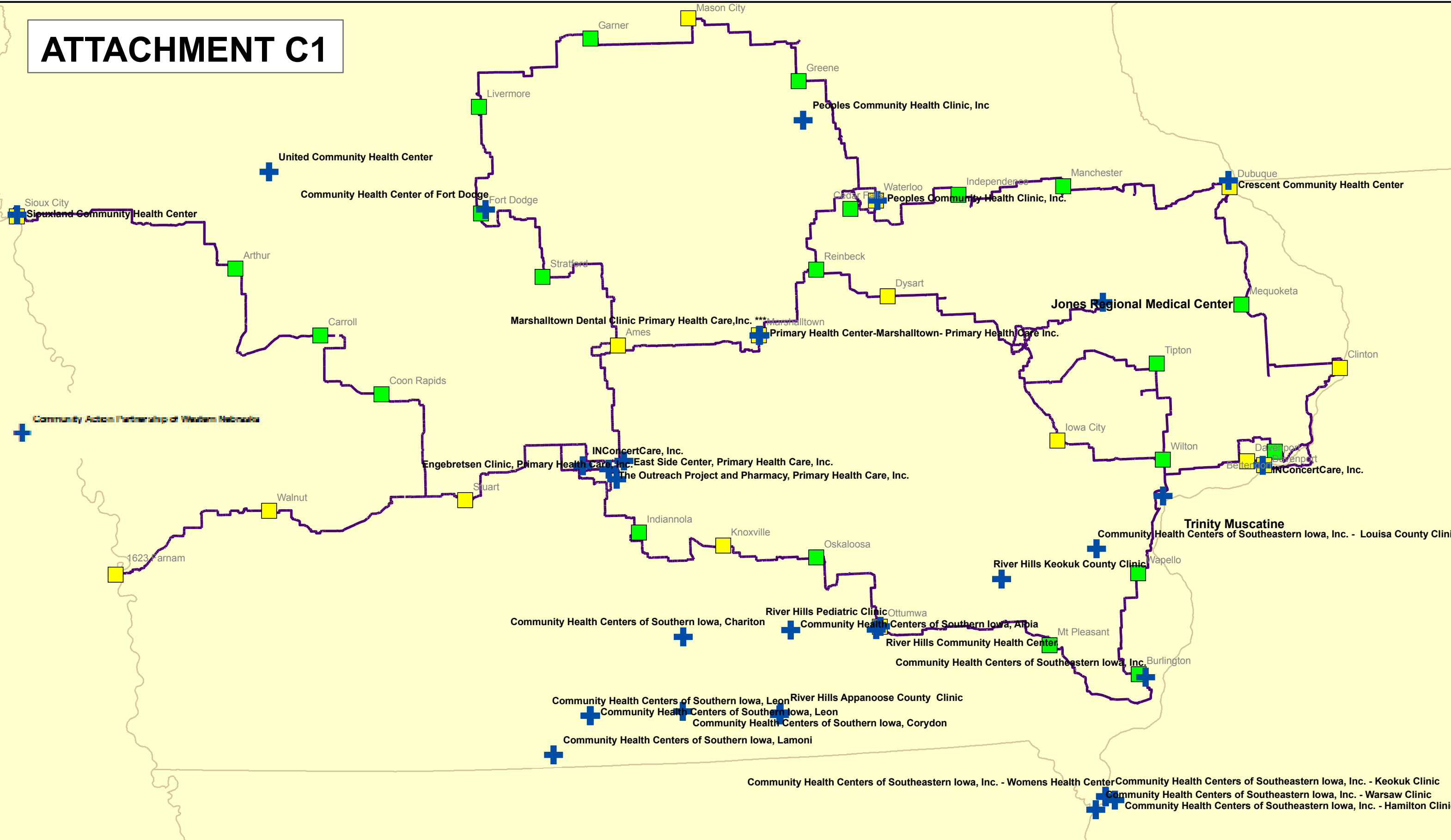


## Legend




- HEALTHNET CONNECT PHASE 1 LOCATIONS
- CORE FIBER ACCESS POINT - CARRIER POP
- CORE FIBER ACCESS POINT - IHS POP



# ATTACHMENT C1



## Legend

-  HEALTHNET CONNECT PHASE 2 LOCATIONS
-  CORE FIBER ACCESS POINT - CARRIER POP
-  CORE FIBER ACCESS POINT - IHS POP



## HealthNet connect Locations & Access Points



**Attachment D**

**Iowa Health System Sustainability Plan**

*Prepared by:*

---



Fiberutilities Group  
Armstrong Centre  
Suite 500  
222 Third Avenue, SE  
Cedar Rapids, IA 52401  
(319) 364-3200

## **Iowa Health System Sustainability Plan**

### *Overview*

The application of Iowa Health System (“IHS”) under the FCC’s Rural Healthcare Pilot Program (“RHCPP”) sought funding for the purpose of constructing access connections to the existing core network of IHS (“Access Connections”). As demonstrated by this sustainability plan, IHS anticipates that it will be able to meet the ongoing operation expenses of the Access Connections from revenues generated by eligible and ineligible users. In fact, IHS expects that the Access Connections will be fully funded and self-sustaining by the fifth year of operation and will remain self-sustaining, including generating sufficient revenues to cover capital costs on an ongoing basis.<sup>1</sup>

This Plan shows nominal losses for the Access Connections in the first three years, then positive cash flow for the remainder of the 20 year projection,<sup>2</sup> including generating sufficient cash to cover electronics replacement for eligible users.<sup>3</sup> IHS anticipates sponsoring capital, operational and maintenance costs as well as any cash flow shortfalls.<sup>4</sup>

IHS is Iowa’s first and largest integrated health-care system, serving nearly one of every three patients in Iowa. IHS has hospitals in 14 rural communities and group practices of physicians and clinics in 71 communities. It also has a workforce of nearly 20,000 employees and annual revenues of almost \$2 billion. The core network of IHS which is operational today is a 2,170 route mile, fiber optic-based network used for IHS’ internal traffic as well as data transmissions between and among IHS’ facilities located in seven large Iowa communities plus Rock Island and Moline, Illinois.

In short, IHS has the managerial, technical and financial wherewithal to operate and maintain not only its core network but the Access Connections to that network on a sustainable basis.

### *Plan Assumptions*

The plan reflects the costs to build, maintain, and operate the Access Connections to the IHS core network. IHS estimates that its direct administrative cost of supporting users is

---

<sup>1</sup> Future capital costs are limited to equipment replacement as the equipment obsolesces.

<sup>2</sup> IHS used a 20 year projection because it replicates the life of dark fiber IRUs and is within the range of reasonableness for projecting revenues, expenses and cash flow.

<sup>3</sup> Exhibit A shows a few years of negative cash flow (2010 through 2011 and 2014 through 2021) but the amounts are small (\$335,905 or 3% of the total project costs).

<sup>4</sup> The RHCPP Application of IHS shows additional capital costs of approximately \$2.7 million whereas Exhibit A shows those costs as approximately \$2.5 million. The analysis for the Application was done in 2007 whereas Exhibit A was completed in late 2008. During that period of time, IHS had the benefit of reviewing the RFPs of interested providers, the project changed from a complete build to a phased build and the Application is based on dark fiber which is no longer available.



\$82 per user, per month. This amount includes governance, overhead and other miscellaneous support required for users.

The plan tests the financial assumptions for sustainability of the IHS project. The basic approach is to determine whether it will generate sufficient revenues to cover operating costs and provide the funds necessary to periodically refresh electronics. The RHCPP funds (85%) and the funds anticipated to be contributed by IHS (15%) are considered sunk costs.<sup>5</sup>

The plan assumes that it will be supported by both eligible users (not-for-profit hospitals and healthcare providers) and ineligible Users (for-profit healthcare and healthcare-related providers).

#### 1) Eligible Users

The plan limits the total eligible users to 78, as specified in the original FCC application. Eligible users have demonstrated their commitment to the RHCPP by entering into Letters of Agency so that IHS may represent them before USAC. They will also sign the Operating Agreement to become members of HealthNet connect, which will administer the Access Connections on behalf of IHS.

Consistent with that outlined in the RHCPP application of IHS, the plan is based on the goal of insuring that eligible users can participate in basic network applications for a nominal cost. With this in mind, a “basic package” was established at the nominal rate of \$120 per month per eligible user and increases (at an annual rate equivalent to the CPI) to \$187 by the 15<sup>th</sup> year and \$210 by the 20<sup>th</sup> year.<sup>6</sup> For \$120 per month, eligible health care providers will enjoy full usage of healthcare data and applications and Internet2/NLR connectivity over a 100 Mbs connection. This type of connectivity would normally cost between \$2500 and \$3000 per month if purchased directly from the commercial marketplace.

The charge of \$120 per month is not exact nor is it based on an in-depth study of demand. Instead, it takes into consideration the financial resources of rural hospitals that are the target market for the package, the costs of the Access Connections and what appears reasonable under the circumstances. If it turns out that the charge is too high or too low, IHS will need to reconsider it, but in the context of affordability.

---

<sup>5</sup> The 15% contribution for the first phase of the project (28 eligible users) will be funded by IHS from internal sources. It is anticipated that the 15% contribution for succeeding phases will also be funded by IHS from internal sources. It should also be noted that Exhibit 3 of the IHS RHCPP Application before the FCC showed that IHS will fund approximately 39% of the total cost of the project (\$4,994,658 of \$12,797,390), which included not only the Access Connections but also the associated backbone and metro costs. The costs of the Access Connections, however, is approximately \$9.2 million, 85% of which, or approximately \$7.8 million, will be funded with RHCPP funds and 15% of which, or approximately \$1.38 million, will be funded by IHS.

<sup>6</sup> In this instance, the word “nominal” means the estimated, direct costs of governance of the eligible group of users.

Eligible users needing such connections are currently limited to buying various services, such as DSL or T-1's. The typical charge for these connections in rural areas is different than the charge for 100 Mbs connections quoted above and range from \$250 to \$1500 per month. However, the bandwidth of a DSL or T-1 of 1.5 Mbs is relatively narrow in comparison to 100Mbs. As such, it barely supports critical health care functions (*e.g.*, internet, radiology, back office business functions *etc.*). It is reasonable to assume therefore, that eligible healthcare providers will redirect some, if not, all of the dollars otherwise spent on various telecom services to the IHS care network by purchasing the basic package.

The plan generates sufficient revenues to replace eligible user electronics every five years. Electronics have an assumed five-year useful life, with a \$10,000 per user replacement cost, plus spares, setup, installation, warranty and contingency amounts.

## 2) Ineligible Users

Ineligible users will not be using any portion of the Access Connections funded under the RHCPP. Ineligible users will be required to pay the full cost of connecting to the network and upgrading their electronics.<sup>7</sup> Once connected, however, they receive the same benefits received by eligible users but at a higher rate of \$250 per month increasing (at an annual rate equivalent to the CPI) to \$389 by the 15<sup>th</sup> year and \$438 by the 20<sup>th</sup> year.

Similar to eligible users, it is expected that ineligible users will be able to reduce or eliminate some existing costs by converting existing traffic and routing future traffic over the IHS core network.

This plan reflects the offsetting basic user fees generated by an assumed number of ineligible participants over a 20-year period. This plan estimates the number of ineligible users at 30 in the first year, growing to 74 over the 20 years of the project

Following are additional assumptions underlying the plan:

### 1) General

- A projected start year of 2009
- Only 6 months of revenue in the first year of operation

---

<sup>7</sup> Since the charges paid by eligible users will be nominal (see *supra*, note 6), the charges paid by ineligible users will not only cover the full cost of connecting to the network and upgrading their electronics but it will also include a subsidy of the costs incurred by eligible users. In other words, the costs allocated to ineligible users is determined by calculating the total costs of the project and then subtracting the nominal costs attributable to eligible users.

- Upgrade in edge routers of \$290,000, \$290,000, and \$200,000 in 2014, 2015, and 2016, respectively and again in 2019, 2020, and 2021 as well as 2024, 2025, and 2026
- An annual CPI adjustment of 3%

2) Capital Costs

- Depreciation rates based on standard GAAP/IRS useful lives.
- A capital expenditure contingency of 5% of the total non-fiber capital expenses
- The capital refresh cost is set equal to the initial cost for the same asset. The assumption is that the same dollars will buy then-current capabilities in the electronics. The basis for this assumption is that the price-performance curve for digital technology has been improving for decades. The approach for this Plan, therefore, assumes that the price in dollars for a particular piece of electronics will be the same in 10 years as it is now, but the capabilities will have improved substantially.
- The source of funds for future capital requirements is the net income generated from the operation of the network, primarily ineligible users. Exhibit A shows that sufficient net revenues will be generated to fund replacement electronics.

3) Operating Costs

- Per edge router (*e.g.*, 1 per user) of \$100 per month plus nominal annual charges for licensing, right-of-way, software and miscellaneous costs.

4) Planning (direct G&A)

- Direct general and administrative expense (governance, overhead and other miscellaneous support) of \$82 per customer.

5) Pricing (*see* descriptions above of Eligible Users and Ineligible Users)

6) Take Rates

- Eligible users top out at 78, which is the amount of users set forth in the IHS RHCPP application

- Eligible users increase over time based on the phased build of the RHCPP funded Access Connections to the IHS core network, *e.g.*, design, RFP, approval, construction, turn up.
- Ineligible users ramp up fairly quickly in the first six years. After six years, the ramp up assumption is conservatively set at one ineligible user per year (the actual market of users is limited by geography and cost)

# Exhibit A

## Summary by Year

### FINANCIAL SUMMARY

Date: December 16, 2008

BY: Fiberutilities Group, LLC

Location: Multi-state

Product/Project Title: Iowa Health System (IHS)

Project Description: This plan tests the financial assumptions for sustainability of the IHS Project. The basic approach is to prove sufficient revenues to cover operating costs and provide funds for periodic electronics refresh. The original grant funds and the matching IHS funds are considered sunk costs; this model only considers what is required to sustain operations.

#### Financial Summary (20 YEAR TOTAL):

Revenues	\$ 8,315,854
Net Income	\$ 137,578
Cash Flow	\$ 2,119,378
Capital Expenditures	\$ 2,457,000

		Average %																				20 YEAR	
SUMMARY BY YEAR		of Revenue	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
Operating Revenues	100.00%	\$	65,880	\$ 225,076	\$ 278,295	\$ 303,035	\$ 329,009	\$ 356,268	\$ 370,538	\$ 385,344	\$ 400,705	\$ 416,640	\$ 433,171	\$ 450,319	\$ 468,106	\$ 486,555	\$ 505,689	\$ 525,534	\$ 546,114	\$ 567,456	\$ 589,587	\$ 612,535	\$ 8,315,854
Non Recurring Revenue	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL REVENUE	100.00%	\$	65,880	\$ 225,076	\$ 278,295	\$ 303,035	\$ 329,009	\$ 356,268	\$ 370,538	\$ 385,344	\$ 400,705	\$ 416,640	\$ 433,171	\$ 450,319	\$ 468,106	\$ 486,555	\$ 505,689	\$ 525,534	\$ 546,114	\$ 567,456	\$ 589,587	\$ 612,535	\$ 8,315,854
Internet2/NLR access	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GROSS MARGIN	100.00%	\$	65,880	\$ 225,076	\$ 278,295	\$ 303,035	\$ 329,009	\$ 356,268	\$ 370,538	\$ 385,344	\$ 400,705	\$ 416,640	\$ 433,171	\$ 450,319	\$ 468,106	\$ 486,555	\$ 505,689	\$ 525,534	\$ 546,114	\$ 567,456	\$ 589,587	\$ 612,535	\$ 8,315,854
Network Operations & Maint	0.08%	\$	210	\$ 213	\$ 217	\$ 223	\$ 230	\$ 237	\$ 244	\$ 251	\$ 259	\$ 267	\$ 275	\$ 283	\$ 291	\$ 300	\$ 309	\$ 318	\$ 328	\$ 338	\$ 348	\$ 358	\$ 5,497
Sales & Marketing	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Service	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General & Administrative	94.95%	\$	64,428	\$ 226,188	\$ 281,088	\$ 292,068	\$ 303,048	\$ 314,028	\$ 316,224	\$ 318,420	\$ 320,616	\$ 322,812	\$ 325,008	\$ 327,204	\$ 329,400	\$ 331,596	\$ 333,792	\$ 335,988	\$ 338,184	\$ 340,380	\$ 342,576	\$ 344,772	\$ 6,107,820
Depreciation and Amortization	3.50%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ 52,200	\$ 104,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 140,400	\$ 1,981,800
Bad Debts	1.00%	\$	659	\$ 2,251	\$ 2,783	\$ 3,030	\$ 3,290	\$ 3,563	\$ 3,705	\$ 3,853	\$ 4,007	\$ 4,166	\$ 4,332	\$ 4,503	\$ 4,681	\$ 4,866	\$ 5,057	\$ 5,255	\$ 5,461	\$ 5,675	\$ 5,896	\$ 6,125	\$ 83,159
TOTAL OP EXPENSES	99.53%	\$	65,297	\$ 228,652	\$ 284,088	\$ 295,322	\$ 306,568	\$ 370,027	\$ 424,573	\$ 462,925	\$ 465,282	\$ 467,645	\$ 470,014	\$ 472,390	\$ 474,772	\$ 477,162	\$ 479,558	\$ 481,962	\$ 484,373	\$ 486,792	\$ 489,220	\$ 491,656	\$ 8,178,276
Interest Exp (cost of capital)	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL EXPENSE	99.53%	\$	65,297	\$ 228,652	\$ 284,088	\$ 295,322	\$ 306,568	\$ 370,027	\$ 424,573	\$ 462,925	\$ 465,282	\$ 467,645	\$ 470,014	\$ 472,390	\$ 474,772	\$ 477,162	\$ 479,558	\$ 481,962	\$ 484,373	\$ 486,792	\$ 489,220	\$ 491,656	\$ 8,178,276
Interest Income	0.00%	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Income et Income		\$	583	\$ (3,576)	\$ (5,792)	\$ 7,714	\$ 22,441	\$ (13,759)	\$ (54,035)	\$ (77,581)	\$ (64,577)	\$ (51,005)	\$ (36,843)	\$ (22,071)	\$ (6,666)	\$ 9,393	\$ 26,131	\$ 43,572	\$ 61,741	\$ 80,663	\$ 100,367	\$ 120,879	\$ 137,578
Cash Flow		\$	583	\$ (3,576)	\$ (5,792)	\$ 7,714	\$ 22,441	\$ 38,441	\$ 50,365	\$ 62,819	\$ 75,823	\$ 89,395	\$ 103,557	\$ 118,329	\$ 133,734	\$ 149,793	\$ 166,531	\$ 183,972	\$ 202,141	\$ 221,063	\$ 240,767	\$ 261,279	\$ 2,119,378
EBITDA percent of gross			0.89%	-1.59%	-2.08%	2.55%	6.82%	10.79%	13.59%	16.30%	18.92%	21.46%	23.91%	26.28%	28.57%	30.79%	32.93%	35.01%	37.01%	38.96%	40.84%	42.66%	25.49%
Fixed Asset Additions (GL Additions)		\$	-	\$ -	\$ -	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 2,457,000
Capital Expenditures (Cash for Assets)		\$	-	\$ -	\$ -	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 304,500	\$ 304,500	\$ 210,000	\$ -	\$ -	\$ 2,457,000
Cumulative Capital Expenditures		\$	-	\$ -	\$ -	\$ -	\$ -	\$ 304,500	\$ 609,000	\$ 819,000	\$ 819,000	\$ 819,000	\$ 1,123,500	\$ 1,428,000	\$ 1,638,000	\$ 1,638,000	\$ 1,638,000	\$ 1,942,500	\$ 2,247,000	\$ 2,457,000	\$ 2,457,000	\$ 2,457,000	

## Exhibit B

### Access Connection Revenues versus Expenses and Cash Flow

